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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,718	12/12/2000	Stephen Ma	2705-93	5593

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MARGER JOHNSON & MCCOLLOM, P.C.
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EXAMINER

HO, DUC CHI

ART UNIT	PAPER NUMBER
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2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No.	Applicant(s)	
	09/735,718	MA ET AL.	
	Examiner	Art Unit	
	Duc C. Ho	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10,13-16 and 19-22 is/are rejected.
- 7) ☒ Claim(s) 3-4, 11-12, and 17-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-2, 5-10, 13-16, and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in figure 2, hereinafter referred to as the APA, in view of Bakke et al.(US 5,566,170-IDS record), hereinafter referred to as Bakke.

Regarding claim 1, the APA discloses the forwarding engine 58-fig.2 as a first processor for performing a lookup for a received data packet from the port 62-fig.2, see page 10, lines 16-22, and the packet is destined for one of the ingress ports. The engine 58 processes the packet's header, and should be able to look up information regarding an ingress port identification and appropriate DSP/modem board, and prepends a L2 Ethernet header containing the information

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addressed to dial shelf 50 (corresponding to using a first processor in the network access server to perform a routing table lookup for a received packet; determining from the results of the routing table lookup, a routing table identifier, and using the identifier to determine the location of the routing information in the routing table).

The APA, however, does not expressly teach a second processor responsible for processing and forwarding the received packet.

One skill in the art would recognize the advantage of having a second processor for processing and forwarding the received packet so that the NAS can better handle large numbers of input streams, large numbers of output destinations and lines, etc.

Bakke discloses method and apparatus for accelerated packet forwarding. The FPP (Fast Protocol Processor) 104-fig.2 includes a plurality of first processors for performing identification, validation, modification, etc. in order to reduce most of the processing steps before forwarding to a second processor, which is the forwarding processor 108-fig.2 so that it can better handle a large numbers of output destinations and lines, etc., see col. 8-line 64 to col. 10-line 67, and figure 6, col. 12, lines 14-50.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the APA with Bakke.

The suggestion/motivation for doing so would have been to better handle a large numbers of output destinations and lines without delay.

Therefore, it would have been obvious to combine the APA with Bakke to obtain the invention as specified in claim 1.

Regarding claim 2, the forwarding engine 58-fig.2 of the APA prepends a L2 header to the received packet containing the routing table identifier, such as a destined ingress port from an appropriate DSP/modem board. The second processor as modified by Brewer should be able to remove the L2 header from the received packet, and to forward the packet to the destined location as indicated by the identification.

Regarding claim 5, the engine 58-fig.2 of the APA is capable of classifying whether the received packet is layer three packet, i.e., the IP packets, or higher, and sending to the forwarding processor the layer three IP packets or higher destined to the identified ingress ports.

Regarding claim 6, the engine 58-fig.2 of the APA is capable of passing an indication of packet subclass to a forwarding engine.

Regarding claim 7, the processing identification of an ingress port of the APA informs a forwarding engine what processing remains to be done.

Regarding claim 8, the APA discloses a selection of the DSP/modem board, and therefore the identified ingress port of the board should be known.

Regarding claim 9, 14-15, these claims have similar limitations as claims 1. Therefore, they are rejected under the APA-Bakke for the same reasons set forth in the rejection of claim 1.

Regarding claim 10, the APA includes a FE hub 54-fig.2 for managing access sessions associated with the ingress ports.

Regarding claim 13, this claim has similar limitations as claim 5. Therefore, it is rejected under the APA-Bakke for the same reasons set forth in the rejection of claim 5. The APA discloses the L2TP (Layer 2 tunneling protocol), and VoIP services, see page 3, lines 9-25 of the instant application.

Regarding claims 16, and 19-22, these claims have similar limitations as claims 2, and 5-8, respectively. Therefore, they are rejected under the APA-Bakke for the same reasons set forth in the rejection of claims 2, and 5-8, respectively.

Allowable Subject Matter

4. Claim 3-4, 11-12, and 17-18 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Ho whose telephone number is (703) 305-1332. The examiner can normally be reached on Monday through Friday from 7:00 am to 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner



Duc Ho

03-13-07